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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,367	03/05/2002	Robert B. Beelman	61751-10201	7301

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EXAMINER	
BHAT, NINA NMN	
ART UNIT	PAPER NUMBER
1761	

DATE MAILED: 06/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/091,367	BEELMAN ET AL.
	Examiner	Art Unit
	N. Bhat	1761

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 December 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *37-41 and 44-50* is/are allowed.

6)☒ Claim(s) *1-36,42 and 43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a)☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4*
4)☐ Interview Summary (PTO-413) Paper No(s) _____
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other:

DETAILED ACTION

1. Claims 37-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 37 and 38 "the first pH neutralizing" lacks positive antecedence.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 30-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Martin et al.[USP 6,500,476].

Martin et al. teaches a preservative composition and method for cleaning mushrooms using a commercially viable three stage preservation process which includes contacting the mushroom with a high pH solution for microbial reduction, followed by neutralizing the mushrooms with a neutralizing solution, followed by contacting the mushrooms with anti-browning composition. The pH neutralizing solution can include an aqueous pH neutralizing buffer solution comprising organic acid and at least one salt of an organic acid. The antibrowing solutions include sodium erythorbate, EDTA and anhydrous calcium chloride. Specifically, Martin et al. teach contacting the mushrooms with a first antimicrobial solution having pH of at least about 9.0 which

reads on pH greater than 9 and then rinsing the mushrooms after the antimicrobial contacting step with a pH neutralizing solution having a pH sufficient to return the mushrooms to the mushroom physiological pH of about 6.5 comprising an acidulant such as an organic acid. The neutralizing solution can include an antibrowning ingredient or contacting directly with an antibrowning solution. The process as described in Martin et al. teach applicant's claimed invention.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-29, 34-36 and 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. [USP 6,500,476] in combination with Koseki et al. further in view of Nakamura et al.

Martin et al teach a preservation composition and three-stage preservation process for mushrooms. The process includes contacting the mushrooms with a high pH solution for microbial reduction; a neutralizing step to return the pH of the

mushrooms to their physiological pH and an antibrowning step to prevent enzymatic browning reactions as well as can and antioxidants or other auxiliary to maintain the color of the finished cleaned mushrooms. [Note the abstract, Column 3 lines 22-68 and Column 4, lines 1-68 et seq and the claims]

However, Martin et al. does not teach or recognize using electrolyzed basic water as a high pH wash or using acidic electrolyzed water as a pH neutralizing liquid.

Koseki et al. teach using acidic electrolyzed water or ozonated water or sodium hypochlorite or tap water solutions for cleaning and decontaminating lettuce. The study performed by Koseki et al. teach that acidic electrolyzed water is effective in controlling microorganisms and decontaminating lettuce without damaging the lettuce tissue. Koseki et al. teach that using acidic electrolyzed water in disinfecting produce produces results in decontamination and a decrease in microbial activity, which is commensurate with using ozonated water for treating the produce.

Nakamura et al. teach using electrolyzed water for sterilizing and rinsing for an end use wherein the pH of the electrolyzed water is within a range of 6-8, the electrolyzed water is used to as an antimicrobial agent or sterilizing solution for use in kitchens, hospitals, hands, equipment, clothing, environments, foods and the like. [Note claim 1, and Column 1, lines 1-20 and Column 2, lines 6-68] The electrolyzed water having a pH, which is maintained between 6-8, has a high sterilizing capability, which is capable of sterilizing germs, which form spores having a high tolerance.

It would have been obvious to one having ordinary skill in the art at the time the invention was made, from the combined teachings of Martin et al. in combination with

Koseki et al. and Nakamura et al. to provide a method of preserving fresh and processed mushrooms or produce because Martin teaches a 3 step process of preserving mushrooms or other produce which comprises the step of contacting the mushrooms with a first antimicrobial solution having a pH of at least about 9.0 and then rinsing the mushrooms after the antimicrobial contacting step with a pH neutralizing solution, followed by treating with an antibrowning agent. Martin et al. does not teach specifically using electrolyzed water in either the antimicrobial step or neutralizing step. Both Koseki et al. and Nakamura et al. recognize using acidic electrolyzed water or basic electrolyzed water for is known use as an antimicrobial. To substitute the specific acidic or basic electrolyzed water for a antimicrobial solution having a pH of at least about 9.0 would have been an obvious substitution because the art has recognized that basic electrolyzed water can be used in sterilizing and rinsing agents in the decontamination of foods, hands, hospitals, kitchens, by contact with electrolyzed water having a pH which is controlled between a pH of 6-8 as taught in Nakamura, or an acidic pH electrolyzed water for decontaminating lettuce or other produce as taught in Koseki et al. thus the method as a whole has been fairly suggested by the prior art.

7. Claims 37-41 and 44-50 are free of the prior art as the prior art does not teach or suggest using electrolyzed water as the antimicrobial solution which is used with pH neutralizing solutions which also can include electrolyzed water, ozonated water, or using basic electrolyzed water as the antimicrobial step, followed by using ozonated water or acidic electrolyzed water or chlorine dioxide as a pH neutralizing step.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Satoh et al. teach washing items with electrolyzed water having a pH of 9.5 or more. Spinoglio teach a process for treating vegetables such as mushrooms using ice water. Lehmann et al. teach aqueous concentrate for cleaning foods having animal or vegetable origins such as mushrooms using the aqueous concentrate followed by rinsing with water.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Bhat whose telephone number is 703-308-3879. The examiner can normally be reached on Monday-Friday, 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 703-308-3959. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5665.

N. Bhat
Primary Examiner
Art Unit 1761

June 9, 2003